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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,412	01/06/2004	Takehiko Murata	0229-0791P	3177

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EXAMINER

MAKI, STEVEN D

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/751,412

Applicant(s)

MURATA, TAKEHIKO

Examiner

Steven D. Maki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-11 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 013105, 010604.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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1) Claims 5-10 are objected to because of the following informalities: In claims 5-10, all occurrences of "should" should be --shoulder--. Appropriate correction is required.

2) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3) Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 11, it is unclear what is chamfered. In claim 11 line 2, it is suggested to insert --edges-- after "chamfered".

4) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6) **Claims 1-3 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Himuro (US 6892775).**

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Himuro discloses a pneumatic tire having excellent drainage property including a tread wherein the tread comprises:

circumferential center grooves 4, 4 (axially inner circumferential grooves);

circumferential side grooves 5,5 (axially outer circumferential grooves);

slant grooves (main oblique grooves) comprising a gently slant portion 2 inclined at 70-80 degrees with respect to the circumferential direction and a steeply slant portion 1 inclined at 20-40 degrees with respect to the circumferential direction; and

"auxiliary oblique grooves" comprising a side 6 connecting (a) a gently slant groove 2 (which opens to side groove 5) and (b) a groove, which opens to and is inclined in the opposite direction of the steeply slant groove

wherein the central region TC has a width of 30-60% tread width. See Figure 2 and col. 4 line 49.

Claim 1 is anticipated by Himuro. In any event: it would have been obvious to one of ordinary skill in the art to position Himuro's outer circumferential grooves 5 and inner circumferential grooves 4 so as to define "axially inner regions each having an axial width L1 of from 0.15 to 0.25 times the critical width TW1" since Himuro teaches locating the outer circumferential groove near the boundary of the central region TC, which may have a width of 30-60% of the tread width TW and arranging a land portion at the centerline / equatorial plane so that the axially inner circumferential grooves are spaced from the centerline / equatorial plane wherein the axially inner circumferential groove is wider than the axially outer circumferential groove.

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As to claim 2, the connecting sipe 6 is a narrower middle part.

As to claim 3, Himuro shows the oppositely inclined groove of the "auxiliary oblique groove as opening to the steeply slant groove at a "connected point" generally about midway between the circumferential grooves.

7) Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Himuro as applied above and further in view of Japan 709 (JP 2001-71709).

As to claim 4, it would have been obvious to one of ordinary skill in the art to provide an axially inner portion of Himuro's steeply slant grooves with the claimed shallow part in view of Japan 709's teaching to provide a connection part 9 ("shallow part") in an axially inner portion of a steeply slant groove of a directional tire tread such that it connects the chamfered ends of adjacent blocks so as to improve steering stability and noise reduction.

8) Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Himuro as applied above and further in view of Hutson et al (US 5746849).

Himuro teaches "oblique shoulder grooves" and "auxiliary grooves", except that Himuro does not recite extending the "auxiliary shoulder grooves" (each of which are aligned with the above noted "auxiliary oblique grooves" having the connecting sipe 6) to before (in contrast to beyond) the critical tread edge]. As to claims 5 and 6, it would have been obvious to one of ordinary skill in the art to extend Himuro's "auxiliary shoulder grooves" to an axial position before the critical tread edge since Hutson et al, also directed to a directional tire tread for use on wet surfaces and having steeply slant grooves, shows configuring "auxiliary shoulder grooves" extending from the outermost

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circumferential groove with a short length so that they terminate in the shoulder row of tread elements and provide the shoulder row with a higher net to gross (e.g. 84%).

9) Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Himuro in view of Hutson et al as applied above and further in view of Japan 310 (JP 2-141310).

As to claims 8-10, it would have been obvious to one of ordinary skill in the art to chamfer the heel side edges (leading edges) but not the toe side edges of Himuro's lateral grooves ("main oblique grooves" including the steeply slant groove 1 / "oblique shoulder grooves" extending from circumferential groove 5 / "auxiliary shoulder grooves" extending from circumferential groove 5) since Japan 310 suggests chamfering the leading edge (heel) of blocks of a directional tire tread to improve block rigidity and high speed running performance.

10) Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Himuro as applied above and further in view of Great Britain (GB 1549347).

As to claim 11, it would have been obvious to one of ordinary skill in the art to provide Himuro's circumferential grooves such that they have axially inner chamfered edges and axially outer edges not chamfered since Great Britain suggests chamfering at least one side of lugs (blocks) to reduce wear.

Allowable Subject Matter

11) Claim 7 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Oppositely inclined shoulder groove portions are known per se as shown by Japan 405 (Japan 63-90405) and Suzuki et al (US 4986324). However, there is no motivation to further modify Himuro such that the auxiliary shoulder grooves, which extend to an axial position before the critical tread edge, are inclined oppositely to the oblique shoulder grooves.

Remarks


12) The remaining references are of interest.

13) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki
September 14, 2005


STEVEN D. MAKI
PRIMARY EXAMINER
~~GROUP 1300~~
AU 1733 9-14-05